

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
WASTE DIVISION  
OFFICE OF WASTE PERMITTING**

**PERMITTING GUIDANCE FOR ESTABLISHING OR CHANGING THE DAILY WASTE  
ACCEPTANCE RATE AT LANDFILLS**

The procedures set forth in this document are intended solely for the guidance of solid waste permit writers at the Department of Environmental Quality (Department). They are not intended to, nor do they constitute rulemaking by the Department. They may not be relied upon to create a right or benefit, substantive or procedural, enforceable at law or in equity, by any person. Whether and how the Department applies these procedures in any given case will depend on the facts of the case.

## **1. Introduction**

Permit applications and permit amendment applications for solid waste disposal facilities must demonstrate facility designs (infrastructure) are in compliance with the Regulations. The primary input to landfill designs is based on the waste flow to the facility and the waste volume at the facility. The infrastructure and effective operational support are critical prerequisites to proper landfill management. Landfills that are managed with a high degree of safety and effectiveness protect public health and the environment. Like all engineered facilities there are physical and operation limits on the individual components that make up the total facility. Each component must have size or capacity that may limit the total facility design or operation. Most disposal facilities are referred to as waste containment facilities. Infrastructure or operational limits of the waste flow that are exceeded often result in component failure or operational failure (non-compliance) and are typically a precursor to a release to the environment. This guidance will provide permit writers with the current regulatory requirements and information to administratively and technically evaluate impacts on the landfill from daily waste flow and increases in landfill capacity.

The procedures contained in this guidance document apply in the following scenarios:

- When an owner/operator applies for a permit or when an owner/operator applies for an amendment to an existing permit;
- When an owner/operator becomes obligated to comply with a consent order or unilateral order;

## **2. Authority**

Section 10.1-1402 of the Virginia Waste Management Act, Chapter 14 (§ 10.1-1400 *et seq.*) of Title 10.1 of the Code of Virginia, authorizes the Virginia Waste Management Board to promulgate regulations necessary to carry out its powers and duties and the intent of the Act. Section 10-1402,

1408.1, 1409, 1411 authorizes the Board to promulgate regulations requiring an owner/operator of a solid waste disposal facility to provide planning consistency, infrastructure and operational support for a landfill that is impacted by an increase in landfill volume and waste acceptance rate and that is safe and protects human health and the environment. The following excerpts from the Code of Virginia address the issues of waste acceptance or landfill volume, directly or indirectly. The underline portions of the Code have specific applicability to the subject of the guidance.

§ 10.1-1402. Powers and duties of the Board.

The Board shall carry out the purposes and provisions of this chapter and compatible provisions of federal acts and is authorized to:

1. Supervise and control waste management activities in the Commonwealth.
6. Collect data necessary to conduct the state waste programs, including data on the identification of and amounts of waste generated, transported, stored, treated or disposed, and resource recovery.

§ 10.1-1408.1. Permit required; open dumps prohibited.

B. No application for (i) a new solid waste management facility permit or (ii) application for a permit amendment or variance allowing a category 2 landfill, as defined in this section, to expand or increase in capacity shall be complete unless it contains the following:

6. If the application is for a new municipal solid waste landfill or for an expansion of an existing municipal solid waste landfill, a statement, signed by the applicant, guaranteeing that sufficient disposal capacity will be available in the facility to enable localities within the Commonwealth to comply with solid waste management plans developed pursuant to § [10.1-1411](#), and certifying that such localities will be allowed to contract for and to reserve disposal capacity in the facility. This provision shall not apply to permit applications from one or more political subdivisions for new landfills or expanded landfills that will only accept municipal solid waste generated within those political subdivisions' jurisdiction or municipal solid waste generated within other political subdivisions pursuant to an interjurisdictional agreement;

7. If the application is for a new municipal solid waste landfill or for an expansion of an existing municipal solid waste landfill, certification from the governing body of the locality in which the facility would be located that a host agreement has been reached between the applicant and the governing body unless the governing body or a public service authority of which the governing body is a member would be the owner and operator of the landfill. The agreement shall, at a minimum, have provisions covering (i) the amount of financial compensation the applicant will provide the host locality, (ii) daily travel routes and traffic volumes, (iii) the daily disposal limit, and (iv) the anticipated service area of the facility. The host agreement shall contain a provision that the applicant will pay the full cost of at least one full-time employee of the locality whose responsibility it will be to monitor and inspect waste transportation and disposal practices in the locality. The host agreement shall also provide that the applicant shall, when requested by the host locality, split air and water samples so that the host locality may independently test the sample, with all associated costs paid for by the applicant. All such sampling results shall be provided to the Department. For purposes of this subdivision, "host agreement" means

any lease, contract, agreement or land use permit entered into or issued by the locality in which the landfill is situated which includes terms or conditions governing the operation of the landfill; and ...

D. 1. Except as provided in subdivision D 2, no permit for a new solid waste management facility nor any amendment to a permit allowing facility expansion or an increase in capacity shall be issued until the Director has determined, after an investigation and analysis of the potential human health, environmental, transportation infrastructure, and transportation safety impacts and needs and an evaluation of comments by the host local government, other local governments and interested persons, that (i) the proposed facility, expansion, or increase protects present and future human health and safety and the environment; (ii) there is a need for the additional capacity; (iii) sufficient infrastructure will exist to safely handle the waste flow; (iv) the increase is consistent with locality-imposed or state-imposed daily disposal limits; (v) the public interest will be served by the proposed facility's operation or the expansion or increase in capacity of a facility; and (vi) the additional capacity is consistent with regional and local solid waste management plans developed pursuant to § 10.1-1411. The Department shall hold a public hearing within the said county, city or town prior to the issuance of any such permit for the management of nonhazardous solid waste. Subdivision D 2, in lieu of this subdivision, shall apply to nonhazardous industrial solid waste management facilities owned or operated by the generator of the waste managed at the facility and that accepts only waste generated by the facility owner or operator. The Board shall have the authority to promulgate regulations to implement this subdivision.

E. The permit shall contain such conditions or requirements as are necessary to comply with the requirements of this Code and the regulations of the Board and to protect present and future human health and the environment.

The Director may include in any permit such recordkeeping, testing and reporting requirements as are necessary to ensure that the local governing body of the county, city or town where the waste management facility is located is kept timely informed regarding the general nature and quantity of waste being disposed of at the facility. Such recordkeeping, testing and reporting requirements shall require disclosure of proprietary information only as is necessary to carry out the purposes of this chapter.

P. Any permit for a new municipal solid waste landfill, and any permit amendment authorizing expansion of an existing municipal solid waste landfill, shall incorporate conditions to require that capacity in the landfill will be available to localities within the Commonwealth that choose to contract for and reserve such capacity for disposal of such localities' solid waste in accordance with solid waste management plans developed by such localities pursuant to § [10.1-1411](#). This provision shall not apply to permit applications from one or more political subdivisions for new landfills or expanded landfills that will only accept municipal solid waste generated within the political subdivision or subdivisions' jurisdiction or municipal solid waste generated within other political subdivisions pursuant to an interjurisdictional agreement.

§ 10.1-1409. Revocation or amendment of permits.

B. The Director may amend or attach conditions to a permit when:

1. There is a significant change in the manner and scope of operation which may require new or additional permit conditions or safeguards to protect the public health and environment;
3. Investigation has shown the need for additional equipment, construction, procedures and testing to ensure the protection of the public health and the environment from significant adverse effects; or
4. The amendment is necessary to meet changes in applicable regulatory requirements.

#### 10.1-1411. Regional and local solid waste management plans.

The Board is authorized to promulgate regulations specifying requirements for local and regional solid waste management plans.

The Board's regulations shall include all aspects of solid waste management including waste reduction, recycling and reuse, storage, treatment, and disposal and shall require that consideration be given to the handling of all types of nonhazardous solid waste generated in the region or locality. In promulgating such regulations, the Board shall consider urban concentrations, geographic conditions, markets, transportation conditions, and other appropriate factors and shall provide for reasonable variances and exemptions thereto, as well as variances or exemptions from the minimum recycling rates specified herein when market conditions beyond the control of a county, city, town, or region make such mandatory rates unreasonable.

After July 1, 2000, no permit for a solid waste management facility shall be issued until the local or regional applicant has a plan approved by the Board in accordance with the regulations.

### 3. Definitions

The definitions in the Virginia Waste Management Act and the Virginia Solid Waste Management Regulations, 9 VAC 20-80 *et seq.* (Regulation) apply to these Procedures.

#### **Approved design waste intake rate**

- (a) The **average daily intake** is a limit on the rate of solid waste that is permitted to be received at the facility on annual basis and shall be computed quarterly by averaging the total weight of waste received over the calendar days in the quarter. The quarter is 91 days starting with the first day of a calendar year. This is the most waste anticipated to be received over a year, as approved by the Department and contained in the Solid Waste Management Plan for the political subdivision that the landfill is located. The Solid Waste Management Plan is required by regulation to have the landfill capacity and life for a minimum planning period of 20 years. Note: this is an annualized rate that does not depend on the operating hours of the facility.
- (b) The **maximum daily intake** is a limit on the amount of solid waste that is permitted to be received at the facility and shall be computed on amount of waste received during any calendar or operating day, which ever is less.

- (c) The application for a permit modification to increase the daily waste intake rate shall include calculations demonstrating how the increased daily rates will reduce or increase the remaining lifetime of a landfill in years
- (d) The permit application shall contain proposed average and maximum daily tonnage for the facility, and a detailed justification for these tonnage's, based on the following amended sections; 9 VAC 20-80-500.B, C, D (as amended); 9 VAC 20-80-510.G-K (as amended); and (9 VAC 20-80-520.A. & B.); relating to requirement for transportation, needs assessment, Solid Waste Management Plan Consistency, host agreements and other requirements listed below. The permit application shall contain the proposed landfill design capacity. A Design Report (9 VAC 20-80-520.A.& B.) shall contain a description of the existing site conditions and an analysis of the proposed landfill (modifications) that include the proposed design (peak) waste intake rate, proposed approved design landfill capacity (volume) and a site life estimate of the landfill for which approval is being sought. The proposed design waste acceptance rate must describe the number, types and the minimum specifications of all the necessary infrastructure, machinery, equipment, staffing, areas, etc, needed to effectively operate the landfill at the proposed approved design capacity.

Note: An engineering report containing a description of the existing site conditions and an analysis of the proposed landfill infrastructure that must specify the proposed design acceptance rate [**maximum daily intake**] of the landfill for which approval is being sought, describing the number, types and the minimum specifications of all the necessary machinery, equipment, staffing, management areas, access roads, queuing space, scales, etc, needed to effectively operate the landfill at the proposed approved design rate.

**New solid waste management facility** means a facility or a portion of a facility that was not included in a previous determination of site suitability (Part A approval).

**Expansion of a solid waste management facility** means horizontal or vertical expansion of the waste management unit boundary and a net increase in waste volume (airspace) currently approved in a Part A or Part B permit application, whichever boundary is less. Any expansion of the horizontal waste management unit boundary beyond the currently approved facility boundary in the current Part A document would be considered a new facility not an expansion.

**Fill progression**-In accordance with 9 VAC 20-80-520A.1, & B, the following items must be submitted: a detailed description of the landfill's fill progression, addressing and detailing typical daily cell progression and lift sequence, and provisions for subsequent development of the landfill. This description of fill progression must also discuss such contingency operations as having at least separately operable and monitored subcells within the active portion of the landfill. Details of surface water run-off controls from within and around the landfill should also be depicted and discussed. A daily log of solid wastes received at the landfill must be maintained that includes the following information; waste type, quantity, origin and/or hauler and date received. In addition, location of each day's operation shall be indicated on a copy of the detailed fill progression drawing required pursuant to 9 VAC 20-80-

520.B.1.f and C.2.c&d. This plan must also depict the grades needed to comply with the approved closure plan, pursuant to 9 VAC 20-80-520.A.2, C.2.c., and C.2.e, and address progressive capping for landfill development.

Waste types and quantity is in accordance with 9 VAC 20-80-520.C.1. A description of the anticipated amount of all solid waste to be received per day, specifying the quantities received in tons per day, the specifications for the select waste to be placed as the first lift of waste ensuring compliance with the provisions of 9 VAC 20-80-520.C2.c, the method of solid waste placement and compaction, and the anticipated in-place density and how both incoming and in-place density is calculated. Solid waste receiving process- A description of the landfill's solid waste receiving and monitoring process for solid waste, a system for daily recording of solid waste received on a basis of type (such as municipal solid waste, ash, sludge, industrial waste, etc.) and quantity; procedures for identification of the solid waste to be restricted; and identification of those wastes required to undergo special handling, waste inspection or treatment before acceptance (such as, asbestos wastes, sludges, etc.).

### **Approved Design Landfill Capacity (Volume)**

The airspace in a landfill is the volume of space from the top of the protective layer on the base liner to the permitted final grades for the landfill minus the thickness of the cap system. The approved design landfill volume is calculated different than the airspace in a landfill. The approved design landfill volume must be waste only. Provide calculations for: 1) volumetric (total) capacity of the site expressed in cubic yards [final grades minus base grades]; 2) the amount of capacity consumed by soils used for liner construction, daily and intermediate cover, and final cover. 3) net permitted capacity available for waste disposal; The approved design volume in the landfill is #3.). Attach topographic maps, including the delineation of the site property boundary and the disposal area used for the volumetric calculations and the date of survey. A registered engineer shall certify this information.

### **Site Life Estimate**

Provide an estimate of the site life based on the approved design landfill volume of the site and the average waste acceptance and assumptions regarding the compaction density. Include any other factors, which may affect site life (e.g. local restrictions). Leachate recirculation may affect the Site Life Estimate due to an increased waste degradation by adding liquids. Site Life Estimate must be consistent with the Solid Waste Management Plan. Landfills that recirculate leachate must

## **5. Waste Intake Rate**

Owners/operators of a sanitary landfill must demonstrate that the sanitary landfill has the infrastructure and operational support for the average waste acceptance rate, the maximum waste acceptance rate and landfill capacity. The waste acceptance rate and the landfill capacity must be consistent with other requirements in the Code of Virginia and other Regulations that impact the waste

acceptance rate and the landfill capacity. The requirements for landfill permits or amendment to landfill permits that involve a new landfill or an expansion of an existing landfill are in 9 VAC 20-80 and § 10.1-1400, et seq of the Code of Virginia. The requirements for this guidance come from those sources.

Any person, who proposes to establish a new solid waste management facility (“SWMF”), or modify an existing SWMF, shall submit a permit application to the department, using the procedures set forth in this section and other pertinent sections of this part.

## **5.1 Requirements-Planning**

1. Disposal capacity guarantee. If the applicant proposes to construct a new sanitary landfill or expand an existing sanitary landfill, a signed statement must be submitted by the applicant which, guarantees that sufficient deposal capacity will be available in the facility to enable localities within the Commonwealth to comply with their solid waste management plans and certifying that such localities will be allowed to contract for and reserve deposal capacity in the facility.

- a. The applicant shall contact all localities in the Commonwealth advising them of the available disposal capacity in the landfill.
- b. Copies of the letters will be provided to the department.
- c. Landfills owned and operated by a locality, public service authority or other governing body that only accept waste from within their political jurisdiction are not subject to this requirement.

2. Host agreement. If the applicant proposes to construct a new sanitary landfill or expand an existing sanitary landfill, a certification from the local governing body must be provided indicating that a host agreement has been reached between the applicant and the host government or authority.

- a. The host agreement shall include the following provisions at a minimum:
  - (1) The amount of financial compensation the applicant will provide the host;
  - (2) The daily travel routes and traffic volumes;
  - (3) The daily disposal limit; and
  - (4) The anticipated service area of the facility.
- b. The host agreement shall contain a provision that the applicant will pay the full cost of a least one full-time employee of the host locality. The employee’s responsibilities will include monitoring and inspecting waste deposal practices in the locality.
- c. The host agreement shall provide that the applicant shall, when requested by the host locality, split air and water samples so that the host locality may independently test the sample, with all associated costs paid for by the applicant. All such sampling results shall be provided to the department.
- d. No certification from the local governing body will be required if owner and operator of the landfill are a locality or a service authority of which the local governing body is a member.

3. If the application is for a locality owned and operated sanitary landfill, or the expansion of such a landfill, the applicant shall provide information on:

- a. The daily travel routes and traffic volumes;
- b. The daily disposal limit; and
- c. The service area of the facility.

4. If the application is for a new solid waste management facility or an amendment allowing a facility expansion or an increase in capacity, the director shall evaluate whether there is a need for the additional capacity in accordance with §10.1-1408.1 D 1 of the Code of Virginia. The information in either subdivision 9a or 9 b must be provided with the notice of intent to assist the director with the required investigation and analysis. Based on the information submitted, the owner or operator will demonstrate how the additional capacity will be utilized over the life of the facility.

a. For any solid waste management facility including a sanitary landfill, information]\_demonstrating that there is a need for the additional capacity.\_Such information may include:

- (1) The anticipated area to be served by the facility;
- (2) Similar or related solid waste management facilities that are in the same service area and could impact the proposed facility, and the capacity and service life of those facilities;
- (3) The present quantity of waste generated within the proposed service area;
- (4) The waste disposal needs specified in the local solid waste plan;
- (5) The projected future waste generation rates for the anticipated area to be served during the proposed life of the facility;
- (6) The recycling, composting or other waste management activities within the proposed service area;
- (7) The additional solid waste disposal capacity that the facility would provide to the proposed area of service; and
- (8) Information demonstrating that the capacity is needed to enable localities to comply with solid waste plans developed pursuant to §10.1-1411 of the Code of Virginia.
- (9) Any additional factors that provide justification for the additional capacity provided by the facility.

b. As an alternative, for sanitary landfills, based on current or projected disposal rates, information demonstrating there is less than 10 years of capacity remaining in the facility and information demonstrating either of the following:

(1) The available permitted disposal capacity for the state is less than 20 years based on the most current reports submitted pursuant to the Waste Information and Assessment Program in 9 VAC 20-130-165; or

(2) The available permitted disposal capacity is less than 20 years in either:

(a) The planning region, or regions, immediately contiguous to the planning region of the host community.

(b) The facilities within a 75 mile radius of the proposed facility.

## **5.2 Requirements-Landfill Siting**

1. Upon receipt of a complete Part A application, the department shall conduct a technical review of the submittal. Additional information may be required or the site may be visited before the review is completed. The director shall notify the applicant in writing of approval or disapproval of the Part A application or provide conditions to be made a part of the approval. If the application is for a new solid waste management facility, as part of the Part A approval, the director will determine, consistent with the provisions of 10.1-1408.1.D of the Code of Virginia, that there is a need for the additional capacity. The following conditions must be met to demonstrate the need for additional capacity:

a. Existing facilities. For existing facilities where an application is submitted to increase the Part A area of an existing facility:

(1) The facility must have less than 5 years of expected life remaining. Justification for the expected life for the facility will be based on the volume of waste received during the preceding calendar year, and the remaining capacity available under the facility permit. The waste assessment program in 9 VAC 20-130-165.A requires this information to be reported to the department.

(2) Up to 20 years of capacity will be permitted based on the volume of waste disposed in the preceding calendar year.

b. Proposed facilities. If the application is for a proposed facility:

(1) At least one of the existing facilities in the solid waste management planning region must each have less than 5 years of expected life remaining. Justification for the remaining expected life for each facility will be based on the volume of waste received during the preceding calendar year, and the remaining capacity available under each facility permit. The waste assessment program in 9 VAC 20-130-165.A requires this information to be reported to the department.

(2) Up to 20 years of capacity will be permitted. The capacity will be based on the capacity needs outlined in the regional solid waste management plan or on the

waste disposed in the solid waste management planning region during the preceding calendar year as reported under the provisions of the waste assessment program in 9 VAC 20-130-10 et seq. An existing facility with less than 5 years of capacity remaining need not be considered when projecting the future capacity needs of the new facility.

2. For sanitary landfills, the director's notification must indicate that the site on which the landfill will be located is suitable for the construction and operation of a landfill. In making this determination, the director will consider the information presented in the site hydrogeologic and geotechnical report (9 VAC 20-80-510 F), the landfill impact statement (9 VAC 20-80-510 H 1) and the adequacy of transportation facilities (9 VAC 20-80-510 G). The director may also consider other factors at his discretion.

3. In case of the approval or conditional approval, the applicant may submit the Part B application provided the required conditions are addressed in the submission.

4. For sanitary landfills, a VDOT adequacy report prepared by the Virginia Department of Transportation. As required under 10.1-1408.4 A 1 of the Code of Virginia the report will address the adequacy of transportation facilities that will be available to serve the landfill, including the impact of the landfill on the local traffic volume, road congestion, and highway safety.

### **5.3 Requirements – Design**

A. Design/construction- The following requirements have a root design basis of the maximum daily waste intake. A permit application that makes a demonstration of a site design must include calculations based on the maximum daily intake rate. The following design and construction requirements apply to all landfills:

1. Access roads extending from the public road to the entrance of a facility or site and any public access area shall be all weather, and shall be provided with a base capable of withstanding anticipated heavy vehicle loads.
2. Landfill site designs shall provide sufficient area to allow for management of leachate.
3. Compacted lifts of deposited waste shall be designed for a height compatible with daily waste volumes keeping work face areas to a minimum and allowing for a daily compacted cover.
4. The final elevation of the landfill shall be limited by the structural capacity of the liner and leachate collection and removal system and by stability of foundation and slopes.
5. Plans submitted as part of the Part B application shall include the following:

1. Design Plans Design plans prepared by a firm registered to practice professional engineering in the Commonwealth and certified by a registered professional engineer shall consist of, at least, the following:

- a. A title sheet indicating the project title, who prepared the plans, the person for whom the plans were prepared a table of contents, and a location map showing the location of the site and the area to be served.

- b. An existing site conditions plans sheet indicating site conditions prior to development.
- c. A base grade plan sheet indicating site base grades or the appearance of the site if it were excavated in its entirety to the base elevation, before installation of any engineering modifications or the beginning of any filing.
- d. An engineering modification plan sheet indicating the appearance of the site after installation of engineering modifications. More than one plan sheet may be required for complicated sites. This plan is required only for those sites with engineering modifications.
- e. A final site topography plan sheet indicating the appearance of the site, and final contours of the site at closing including the details necessary to prepare the site for long-term care.
- f. A series of phasing plan sheets showing the progression of site development through time. At a minimum, a separate plan shall be provided for initial site preparations and for each subsequent major phase or new area where substantial site preparation must be performed. Each such plan shall include a list of construction items and quantities necessary to prepare the phase indicated.
- g. A site monitoring plan sheet showing the location of all devices for the monitoring of leachate production, groundwater quality and gas production and venting. This plan shall include a table indicating the parameters to be monitored for the frequency of monitoring before and during site development. This separate plan sheet is required only for sites with a design capacity of more than 3 acres. Smaller projects may display this information on other plan sheets for submittal.
- h. A series of site cross-sections shall be drawn perpendicular and parallel to the site base line at a maximum distance of 500 feet between cross-sections and at points of grade break and important construction features. The location of the cross-sections shall be shown on the appropriate plan sheet(s) and the section labeled using the site grid system. Where applicable, each cross-section shall show existing, proposed base and final grades; soil borings and monitoring wells which the section passes through or is adjacent to; soil types, bedrock and water table; leachate control, collection and; monitoring systems; limits of filing for each major waste type; drainage control structures; access roads and ramps on the site parameter and within the active fill area; the filing sequence or phases; and other appropriate site features.
- i. Detailed drawings and typical sections for, as appropriate, drainage control structures, access roads, fencing, leachate and gas control systems and monitoring devices, buildings, signs, and other construction details.
- j. Plan sheet(s) shall include:
  - (1) A survey grid with base lines and bench marks to be used for field control.
  - (2) Limits of filling for each major waste type or fill area.
  - (3) All drainage patterns and surface water drainage control structures both within the actual fill area and at the site perimeter. Such structures may include berms, ditches, sedimentation basins, pumps, sumps, culverts, pipes, inlets, velocity

breaks, sodding, erosion matting, or other methods of erosion control.

- (4) The direction and sequence of filling within each phase.
  - (5) Ground surface contours at the time represented by the drawing. Spot elevations should be indicated for key features.
  - (6) Areas to be cleared and grubbed and stripped of topsoil.
  - (7) Borrow areas for liner materials, gas venting materials, berms, roadway construction, daily cover and final cover.
  - (8) All soil stockpiles including daily and final cover, topsoil, liner materials, gas venting materials and other excavation.
  - (9) Access roads and traffic flow patterns to and within the active fill area.
  - (10) All temporary and permanent fencing.
  - (11) The methods of screening such as berms, vegetation or special fencing.
  - (12) Leachate collection, control, storage, and treatment systems which may include pipes, manholes, trenches, berms, collection sumps, storage units, pumps, risers, liners, and liner splices.
  - (13) Gas, leachate and groundwater monitoring devices and systems.
  - (14) Severe weather disposal areas.
  - (15) Support buildings, scale, utilities, gates and signs.
  - (16) Special waste handling areas.
  - (17) Construction notes and references to details.
  - (18) Other appropriate site features.
2. Closure Plan. A detailed closure plan be prepared and submitted. Such a plan shall be prepared in two parts, one reflecting those measures to be accomplished at the midpoint of the permit period, and the other when the useful life of the landfill is reached. The plan shall show how the facility will be closed to meet the requirements of Part V of these regulations. The plan shall include the procedures to be followed in closing the site, sequence of closure, time schedules, final plans of completion of closure to include final contours, and long-term care plan sheets showing the site at the completion of closing and indicating those items anticipated to be performed during the period of long-term care for the site. The plans shall include a table listing the items and the anticipated schedule for monitoring and maintenance. In many instances this information can be presented on the final site topography sheet.

B. Design Report. A design report shall be submitted which shall include supplemental discussions and design calculations to facilitate department review and provide supplemental information including the following information:

1. The design report shall identify the project title; engineering consultant(s); site owner, permittee and operator; proposed permitted acreage; site life and capacity; municipalities, industries

and collection and transportation agencies served; and waste types and quantities to be disposed. It shall also identify any exemptions desired by the applicant.

2. A discussion of the reasoning and logic behind the design of the major features of the site, such as traffic routing, base grade and relationships to subsurface conditions, anticipated waste types and characteristics, phases of development, liner design, leachate management system design, facility monitoring, and similar design features shall be provided. A list of the conditions of site development as stated in the department determination of site feasibility and the measures taken to meet the conditions shall be included. A discussion of all calculations, such as refuse-cover balance computations, stockpile sizing estimates, estimate of site life and run-off and leachate volume estimates shall be included. The calculations shall be summarized with the detailed equations presented in an appendix.

3. Specifications for site construction and operation shall be presented, including detailed instructions to the site operator for all aspects of site construction and operation. References to specifications on the plan sheet shall be pointed out as well as additional instructions included, where appropriate. The specifications shall include, at a minimum, the following information:

- a. Initial site preparations including specifications for clearing and grubbing, topsoil stripping, other excavations, berm construction, drainage control structures, leachate collection system, access roads and entrance, screening, fencing, groundwater monitoring and other special design features.
- b. A plan for initial site preparation including a discussion of the field measurements, photographs to be taken, sampling and testing procedures to be utilized to verify that the in-field conditions encountered were the same as those defined in the feasibility report, and to document that the site was constructed according to the engineering plans and specifications submitted for department approval.

## **5.4 Requirements – Operations**

The operational support for a landfill in terms of manpower and equipment has a root design basis in maximum tons/day.

1. Routine observation of incoming waste by landfill personnel; Random inspections of incoming loads.
2. Compaction and cover requirements.
  - a. Unless provided otherwise in the permit, solid waste shall be spread into two foot layers or less and compacted at the working face; which shall be confined to the smallest area practicable.
  - b. Lift heights shall be sized in accordance with daily waste volumes. Lift height is not recommended to exceed 10 feet.
2. At least three days of acceptable cover soil or approved material at the average usage rate should be maintained at the landfill or readily available at all times.
3. Any area of a landfill attains final elevation and within 90 days after such elevation is reached.
4. Adequate numbers and types of properly maintained equipment shall be available to a facility for

operation. Provision shall be made for substitute equipment to be available within 24-hours should the former become inoperable or unavailable. Operators with training appropriate to the tasks they are expected to perform and in sufficient numbers for the complexity of the site shall be on the site whenever it is in operation. Equipment and operators provided will not be satisfactory unless they ensure that the site is managed with a high degree of safety and effectiveness.

4. The open working face of a landfill shall be kept as small as practicable, determined by the tipping demand for unloading.
5. A groundwater monitoring system shall be installed consisting of a sufficient number of wells at appropriate locations and depths.
  - a.. The director may approve a multiunit groundwater monitoring system instead of separate groundwater monitoring systems for each disposal unit when the facility has several units, provided the multi-unit groundwater monitoring system meets the requirement of 9 VAC 20-80-250D3a and will be as protective of human health and the environment as individual monitoring systems for each disposal unit, based on the following factors:
    - (1) Number, spacing, and orientation of the disposal units;
    - (2) Hydrogeologic setting;
    - (3) Site history;
    - (4) Engineering design of the disposal units, and
    - (5) Type of waste accepted at the disposal units.
    - (6) At the minimum, at least one up-gradient and three down-gradient monitoring wells shall be installed.

Operations Manual An operations manual shall be prepared and included on how the design and construction plans will be implemented with the initial phase of operation until closure. The manual for a landfill operation shall consist of at least the following information:

1. Municipalities, industries and collection and transportation agencies served; and waste types and quantities to be disposed.
2. Detailed instructions to the site operator for all aspects of site operation. References to specifications on the plan sheet shall be pointed out as well as additional instructions included, where appropriate. The specifications shall include, at a minimum, the following information:
  - a. Initial site preparations including specifications for clearing and grubbing, topsoil stripping, other excavations, berm construction, drainage control structures, leachate collection system, access roads and entrance, screening, fencing, groundwater monitoring and other special design features.
  - b. The initial site preparation including a discussion of the field measurements, photographs to be taken, sampling and testing procedures to be utilized to verify that the in-field conditions encountered were the same as those defined in the plans and design report, and to document that the site was constructed according to the engineering plans and

specifications submitted for department approval.

- c. Daily operations including a discussion of the timetable for development, waste types accepted or excluded, inspection of incoming waste, typical waste handling techniques, hours of operation, traffic routing, drainage and erosion control, windy, wet and cold weather operations, fire protection equipment, manpower, methods for handling of any unusual waste types, methods for vector, dust and odor control, daily cleanup, direction of filling, salvaging, record keeping, parking for visitors and employees, monitoring, closure of filled areas, gas and leachate control methods, backup equipment with names and telephone numbers where equipment may be obtained, and other special design features.
- d. Development of subsequent phases.
- e. Site closing information consisting of a discussion of the anticipated sequence of events for site closing and discussion of those actions necessary to prepare the site for long-term care and final use in the implementation of the closure plan.
- f. An inspection plan, which shall include a schedule for inspecting all applicable major aspects of facility operations necessary to ensure compliance with the requirements of Part V of these regulations. The frequency of inspection shall be based on the rate of potential equipment deterioration or malfunction and the probability of an adverse incident occurring if the deterioration or malfunction goes undetected between inspections. Areas of the facility subject to spills such as loading and unloading areas and areas, in which significant adverse environmental or health consequences may result if breakdown occurs, shall be inspected daily, when in use. The plan shall include a schedule for inspecting monitoring, safety, and emergency equipment; security devices and process operating and structural equipment. The plan shall identify the types of problems which are to be looked for during the inspection and the frequency of inspection.
- g. A post-closure care plan containing long-term care information including a discussion of the procedures to be utilized for the inspection and maintenance of run-off control structures, settlement, erosion damage, gas and leachate control facilities, monitoring for gas; leachate and groundwater, and other long-term care needs.
- h. A safety plan which shall include a description of the proposed measures to protect facility and other personnel from injury during operation;
- i. The control methods to be used by the operator to prevent unauthorized disposal of hazardous wastes, bulk liquids or other wastes not authorized for management or disposal in the facility.
- j. A landscaping plan delineating the existing site vegetation to be retained, and discussing the methods to be employed in order to ensure protection during the clearing, grading and construction phases of the project and the supplemental vegetation to be planted. Information relating to vegetation type, location and purpose, such as for buffer, screening or aesthetics, and schedules for planting, shall accompany the plan.
- k. An emergency contingency plan which delineates procedures for responding to fire, explosions or any unplanned sudden or non-sudden releases of harmful constituents to the

air, soil, or surface water. This emergency contingency plan will be submitted to the local police and fire department and to the nearby health care facilities when the permit will be issued. The emergency plan shall contain:

- (1) A description of the actions facility personnel shall take in the event of various emergency situations;
- (2) A description of arrangements made with the local police and fire department which allow for immediate entry into the facility by their authorized representatives should the need arise, such as in the case of personnel responding to an emergency situation; and
- (3) A list of names, addresses and phone numbers (office and home) of all persons qualified to act as emergency coordinator for the facility. This list shall be kept up to date. Where more than one person is listed, one shall be named as primary emergency coordinator and the others shall be listed in the order in which they will assume responsibility as alternates.

## **5.5 Requirements – Closure**

1. Closure criteria. All sanitary landfills shall be closed in accordance with the procedures set forth as follows:
2. Finished side slopes shall be stable and be configured to adequately control erosion and runoff. Slopes of 33% will be allowed provided that adequate runoff controls are established. Steeper slopes may be considered if supported by necessary stability calculations and appropriate erosion and runoff control features. All finished slopes and runoff management facilities shall be supported by necessary calculations and included in the design manual. To prevent ponding of water, the top slope shall be at least two percent after allowance for settlement.
3. Closure plan and amendment of plan.
  - a. The owner or operator of a solid waste disposal facility shall have a written closure plan. This plan shall identify the steps necessary to completely close the facility at the point of the permit period when the operation will be the most extensive and at the end of its intended life. The closure plan shall include, at least:
    - (1) A description of those measures to be taken and procedures to be employed to comply with 9 VAC 20-80-250E.
    - (2) An estimate of the largest area ever requiring a final cover as required at any time during the active life;
    - (3) An estimate of the maximum inventory of wastes ever on-site over the active life of the landfill facility; and
    - (4) A schedule for final closure which shall include, at a minimum, the anticipated date when wastes will no longer be received, the date when completion of final closure is

anticipated, and intervening milestone dates which will allow tracking of the progress of closure.

## 6. Requirements-Permit Manual

### Section II PERMIT REVIEW AND ISSUANCE

#### A. NOTICE OF INTENT (NOI) [9 VAC 20-80-500 B]

To apply for a new solid waste management facility permit or amend an existing permit, the owner or operator must file a notice of intent with the Department. A permit application for a new facility will include a new Part A application or a Part A amendment. The Part A application should be sent to the Groundwater Permit Manager. A permit amendment for an expansion, in most cases, will just affect the Part B portion of the application. It is the responsibility of the Regional Office Waste Program Manager (WCM) to assess a Part B permit application and determine if the Part A for the facility needs to be modified. A copy of the Part B should be sent to the Groundwater Permit Manager (GPM) for a determination of the Part A impact of the modification and to determine if the Groundwater Monitoring Module in the permit needs to be amended. The RO WCM should discuss the amendment with the GPM. The notice may be submitted by itself or may accompany the Part A permit application or may accompany a Part B permit application described in 9 VAC 20-80-510. Permit writers will review the notice of intent using the procedures in this section.

1. Contents of NOI. The NOI consists of the cover letter and the documents required by the Virginia Waste Management Act and the regulations.

a. *Cover Letter* [9 VAC 20-80-500 B 1]. The owner or operator shall submit a letter to the Regional Waste Compliance Manager describing the type of the desired permit or permit amendment, the precise location of the proposed facility, and the intended use of the facility. Area and site location maps shall be attached to the letter.

b. *Disclosure Statement* [9 VAC 20-80-500 B 2 and Appendix 7.1]. Signed and notarized copies of disclosure statements required by the Virginia Waste Management Act (*see* definition of disclosure statement in §10.1-1400) for each of the key personnel shall accompany the cover letter. Forms shown in Appendix 7.1 (forms DISC-01 and DISC-02) of the VSWMR may be used to fulfill this requirement.

c. *Certification by the Local Governing Body* [9 VAC 20-80-500 B 3 and 500 B 4., and Appendix 7.2]. Applications for new permits, as defined in 9 VAC 20-80-480 C, shall contain a signed original of the certification from the local governing body where the facility will be located stating that the location and the operation of the proposed facility is consistent with all

applicable ordinances. The certification can be signed by a county official with the authority to do so. The certification is usually provided by the zoning administrator or the county, city, or town administrator or manager. To be acceptable, the certification shall not contain any qualifications, conditions or reservations. A copy of an acceptable certification is shown in Appendix 7.2. (form SW11-1) of the VSWMR.

d. *Public Comment for New Sanitary Landfills and Transfer Stations* [9 VAC 20-80-500 B 5, and *see* definition of "New Solid Waste Management Facility" in 9 VAC 20-80-10]. Applications for permits for new sanitary landfills and transfer stations require the NOI to include a statement from the applicant indicating the steps taken to seek comment from residents of the area.

e. *Permit Application Fee* [9 VAC 20-90-10 et seq.]. All applicants for solid waste management facility permits are required to pay a fee as required in 9 VAC 20-90. The fee is due with the notice of intent as stated in 9 VAC 20-90-60 A 2.

g. *Host Community Agreement* [9 VAC 20-80-500 B 7] For applicants proposing to construct a new sanitary landfill or expand an existing sanitary landfill, a certification is required from the local governing body indicating that a host community agreement has been reached between the host jurisdiction and the applicant. The requirement for a host community agreement is taken from §10.1-1408.1 B 7 and 8 of the Code of Virginia. The agreement is required to address the following elements:

- The financial compensation that the applicant will provide the host locality;
- The daily travel routes and traffic volumes;
- The daily disposal limit; and
- The anticipated service area of the facility.
- Provisions for the applicant to pay the cost of one employee for the host locality whose responsibilities will be monitoring and inspecting waste disposal practices for the locality
- Provisions for splitting air and water samples so that the host locality may independently test samples with costs paid by the applicant.

No host agreement or certification is required if the owner or operator is a locality or service authority. Locally owned and operated facilities must provide information on travel routes and traffic volumes, the daily disposal limit and the service area of the facility [9 VAC 20-80-500-B 8].

h. *Director's Determination of Need* [9 VAC 20-80-500 B 9] For applications for new solid waste management facilities or amendments requesting facility expansions or increases in capacity, the director is required to determine that there is a need for the additional capacity [§10.1-1408.1.D.1 of the Code of Virginia]. The information in this section of the regulations requires information to be submitted in order to assist the director with the required investigation

and analysis. Two options are available for submitting information under 9 VAC 20-80-500 B 9a or 9b. The Waste Information and Assessment Program report that is prepared each year, includes the available disposal capacity in the state. This information may be used to fulfill the provisions of 9 VAC 20-80-500 B 9 b. In addition, applicants can provide additional information that is not required by the regulation for the director to consider when justifying that there is a need for the additional capacity that is provided by the facility.

## 2. Administrative Procedures.

- a. The NOI will be submitted to the Waste Compliance and Permitting Manager in the region in which the facility is located.
- b. The Waste Permitting and Compliance Manager shall assign the review of the NOI to a permit writer within 2 working days of receipt. If the notice was accompanied by a Part A application, one copy of the Part A will be forwarded to the Groundwater Permit Manager in the Central Office for processing of the Part A application. Within 5 days of initial receipt of the applications, the permit writer will acknowledge that the NOI has been received with an [NOI Acknowledgment Letter](#). The NOI should state that the permit or permit amendment involves an increase in the waste acceptance rate or proposes a design rate of waste acceptance. The proposed waste acceptance rate must be consistent with the Local Government Solid Waste Management Plan. The SWMP must specially mention the rate of waste acceptance in average and maximum. If the SWMP does not specify the waste acceptance rate, the SWMP will have to be amended. Pertinent page copies of the SWMP must be submitted with the SWMP. If there is a question about the content of the SWMP, the CO Waste Division-OTA should be contacted. The procedures for amending the SWMP must be done in accordance with 9 VAC 20-130. Additionally these numbers must be consistent with the Host Agreement, if one is required. If the applicant is proposing a change to the Waste Acceptance Rate and the new rate is in the SWMP, the applicant must demonstrate that the change in waste acceptance rate does or does not require an infrastructure and operation change at the facility, in accordance with this guidance. A registered professional engineer must certify the determination. If the applicant is proposing, up to a 100% increase (over the current permitted design) in the waste acceptance, the permit writer may process the request as a minor permit amendment, in accordance with 9 VAC 20-80-620, Table 7.2.B.1.a if the request has been certified by professional engineer, the increase (or the higher number) in average daily or maximum daily is specified in the SWMP. The certifying engineer and permit writer should coordinate with the waste compliance staff to determine if there have been any substantive violations or problems at the facility that could relate to the waste acceptance rate. Any increase in of waste acceptance rate over 100% of the design permit rate will typically require a major permit amendment (Table 7.2) and typically there will need to be a change to the facility infrastructure or operational support that will trigger a major permit amendment in accordance with Table 7.2. Any change in waste acceptance rate over 100% of the permit

design that in the determination of the permit writer will not trigger a major permit amendment, the Regional Office staff should get concurrence with the CO Waste Permit Coordinator.

- c. The permit writer shall review the submitted NOI for completeness. For all permits and permit amendments, a correctly completed NOI shall be required before the application can be processed further. If the NOI has missing documents, has not been prepared correctly or does not include a permit application fee, it will be returned to the applicant with a letter noting the deficiencies. See Appendix IIA, [Notice of Deficiencies \(NOD\) Letter](#) to the applicant. The NOD shall be sent to the applicant within 15 days of the receipt of the NOI. The applicant should correct any deficiency in the NOI. The permit writer will request that the applicant return the corrected NOI within 14 days of the date on the NOD.
- d. The permit writer should open lines of communication lines with the applicant early in the review process and offer to hold a pre-application meeting to discuss regulatory and technical issues.
- d. Once the NOI has been found to be complete, the Part A permit writer in Central Office may start working on the Part A of the permit application if it has been received. The permit writer will notify the applicant that the NOI has been completed with an [NOI Complete Letter](#) as shown in Appendix IIA.

## B. PART A APPLICATION [9 VAC 20-80-500 D]

To continue with the permit application process, the owner or operator should file an original and four copies of the complete and current Part A of the permit application with the Department. Submission of electronic copies of the application should be encouraged and may be submitted in lieu of paper copies.

1. Contents of Part A Application. Part A of the application for a solid waste management facility permit contains information essential for the assessment of the suitability of the site for its intended uses. As a minimum, the application shall contain the following information:

- a. *Application Form* [9 VAC 20-80-510 A and Appendix 7.3]. Each Part A application shall contain a fully completed Part A Application Form (form SW7-3). Entries that are not applicable to the type of the permit being applied for should be marked with "N/A" rather than leaving them blank. The statements about the siting criteria (Section II of the Form) should be cross-referenced to the documents and maps attached to the form.
- b. *Permit Application Fee* [9 VAC 20-90-50]. The application must be accompanied by a check for the required permit application fee. The fee is due with the notice of intent as stated in 9 VAC 20-90-60 A 2. Applications not accompanied by the proper fee or containing

insufficient fees will not be considered complete and shall not be processed by the Department. For the disposition of the incomplete application, *see* Section [II.B.2.e](#).

c. *Maps* [9 VAC 20-80-510 B and C]. One or more key maps delineating the general location of the proposed facility shall be appended to the application. It should also contain a near-vicinity map delineating an area of 500 feet from the perimeter of the property line of the proposed facility drawn to a minimum scale of 1" = 200'. The detailed requirements are specified in regulations and *Submission Instructions No.1* .

d. *Proof of Ownership* [9 VAC 20-80-510 D]. Except in the case that the applicant is a local governing body or a regional authority possessing a power of eminent domain, the application shall contain a copy of deed (showing page and book location), lease, option to purchase, or other certification of ownership of site.

e. *Facility Location Requirements* [9 VAC 20-80-180 B, and 250 A, 260 A, 270 A, 330 B, 340 B, 360 B, 370 B, 400 B or 470 B]. Solid waste management facilities must be properly located to ensure that their performance will not lead to unapproved releases to the environment and to keep the unit from areas where the public and sensitive natural environments may be adversely affected. Part A application shall describe how the siting standards will be met and shall be supported by the necessary maps identified in Section [II.B.1.c](#).

f. *Hydrogeologic and Geotechnical Report* [9 VAC 20-80-510 E]. For solid waste disposal facilities, the application must contain a hydrologic and geotechnical report. The hydrologic report (and any geological reports) should be submitted by a Virginia certified professional geologist. The geotechnical report should be submitted by a Virginia certified professional engineer. The report shall include, as a minimum, the material outlined in the *Submission Instructions No. 1*.

g. *Description of Site Geology* [9 VAC 20-80-510 F]. For other facilities, the application shall contain a description and a catalog of aquifers and geological features that might affect the operation of the facility. If a geological map or report from either the Virginia Department of Mines, Minerals and Energy (VDMME) or United States Geological Survey (USGS) is published, it shall be included.

h. *Notification Statement* [9 VAC 20-80-510 G]. The application must contain a signed statement by the applicant indicating that a written notice has been provided to the adjacent property owners or occupants. The notice must indicate that the applicant intends to construct a SWMF on the site. The applicant must also provide the list of names and addresses that were contacted.

Note: On the effective date of Amendment 3 of the Virginia Solid Waste Management Regulations the provisions below will be replaced with the provisions in the next section of this document.

i. *Other Information.* Although not a requirement of the Part A application at this time, it should be noted that the Code of Virginia does contain some requirements that a site must meet to receive wastes. §10.1-1408.4 requires the director to determine in writing that a site for a new municipal solid waste (MSW) landfill is suitable. In order to evaluate the suitability of a site, among other items, the director must consider a report prepared by the Virginia Department of Transportation (VDOT) and the potential impact of the landfill on park and recreational areas, public water supplies, marine resources, wetlands, historic sites, fish and wildlife, water quality and tourism. In addition, §10.1-1408.1 D 1 of the Code of Virginia requires all waste management facilities to be consistent with the local solid waste plan (Regulations for the Development of Solid Waste Management Plans, 9 VAC 20-130) and requires facilities to be in the public interest. The permit writer should also note the requirement of the Code of Virginia in §10.1-1408.1 D 1, which requires the evaluation of comment from the host locality, other localities and interested persons. If information concerning these legislative requirements has not been submitted with the initial NOI or the Part A application, the permit writer shall note that information is required to address these statutory requirements in the next correspondence to the applicant. The department has guidance for fulfilling these legislative requirements is provided in *Submission Instructions No. 9*.

i. *VDOT Adequacy Report* [9 VAC 20-80-510 G] For applications involving new sanitary landfills, the Virginia Department of Transportation is required under 10.1-1408.4.A.1 of the Code of Virginia, to prepare a report addressing the adequacy of the transportation facilities serving the facility.

j. *Landfill Impact Statement* [9 VAC 20-80-510 H] For applications involving new sanitary landfills a report is required addressing the potential impact of the landfill on parks, recreational areas, wildlife management areas, critical habitat of endangered species as designated by federal state and local agencies, public water supplies, marine resources, wetlands, historic sites, fish and wildlife and tourism.

k. *Consistent with the Local Solid Waste Management Plan* [9 VAC 20-80-510 J] For all waste management facilities, §10.1-1408.1 of the Code of Virginia requires facilities to be consistent with the local solid waste management plan. The regulations require the submission of information demonstrating that the facility is consistent including:

- A discussion of the role of the facility in the planning region;
- A discussion of the capacity provided by the facility; and
- References to the solid waste management plan where the facility has been addressed.

1. *Public Interest is Served* [9 VAC 20-80-510 K] For all waste management facilities, §10.1-1408.1 of the Code of Virginia requires facilities serve the public interest. General information is provided for the director to consider when making his required investigation and analysis. In addition, applicants can provide additional information that is not required by the regulation for the director to consider when justifying that the public interest is served by the facility.

## 7. Requirements-Modules

Complete Module will be placed in DEQNET. **Red type is new**

**SOLID WASTE FACILITY PERMIT**  
**PERMIT NUMBER \_\_\_\_**  
[ON DEQ LETTERHEAD]

**Facility Name:**

**Facility Type:**

**Latitude:** 39E08'22"

**Site Location:**

**Longitude:** 78E05'59"

**Location Description:** The facility is located on

**Background:** The facility is to serve as a *sanitary landfill*, in compliance with 9 VAC 20-80-10 et seq. Amendment 4. The facility is designed to accept # tons/day. *For landfills include the total acres of disposal area within the facility boundary; the acres of disposal acres that is new as a result of this permit. If the landfill has cells or Phases then indicate similar to the acres. If the facility is a landfill, provide the total air capacity in cubic yards and the approximate design life of the facility. Site a reference to the approved waste list in the permit and any special waste considerations. Briefly describe the service area for the facility and a sentence description on the waste haulers using the landfill. Provide any special background information that might be needed.*

**Permit Limits:** The facility encompasses XXX acres, of which approximately XX.XX acres have been designated as a waste disposal area. The approved design landfill volume is X million tons. The site life is X.X years. The landfill capacity is limited to an average daily design tonnage rate of \_\_\_\_tons/day and

maximum daily design tonnage of \_\_\_\_tons/day, based on the design capacity in the Design Report/Operations Manual in this permit.

**Permit Highlights:** *Following sentence is only for amendments:* This permit amends the existing permit which was issued *date*. *List any previous amendments and dates.* This permit includes *permit modules and associated permit attachments* which are, in general, based on information submitted in the permit application. *This permit incorporated design elements for a composite liner, which are not provided for in the regulations, but were petitioned for by the permittee pursuant to the requirements of Part IX of the regulations.*

THIS IS TO CERTIFY THAT:

*Permittee*  
*Address*

is hereby granted a permit to construct, operate, and maintain the facility as described in the attached Permit Modules *specify which permit modules and attachments were used and list them in the Reference List.* These Permit Modules and Permit Attachments are as referenced hereinafter and are incorporated into and become a part of this permit.